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RAILWAY ROUTES, We anthony

CANADA.

BY

M. MCLEOD,

" BRITZANNICUS."

A SERIES OF LETTERS PUBLISHED IN THE MONTREAL "GAZETTE."

1874 -12

PREFACE

These letters are respectfully submitted under the special circumstances appearing on their face.

I may add, however, in more distinct terms, that I have entered thus somewhat at length—yet too shortly, hurriedly and imperfectly—into this examination of railway routes across our far wilds, feeling that no one else was, it would seem, likely to do so, though needed.

To public ken, the whole thing is, and has ever been, it may be said, a sealed book; and yet, on a true appreciation of it—of the great scheme in all its features and bearings—can we—the people of Canada—alone grapple it with that courage and determination, and stern honesty of purpose, which it demands.

PACIFIC RAILWAY ROUTES.

CANADA

LETTURS ADDRESSED TO THE EDITOR OF THE MONTREAL GAZETTE, AND PUBLISHED IN THAT PAPER IN THE COURSE OF JUNE AND JULY, 1874.

Sin.—The importance and urgency of this subject are such, I humbly think, as to the Phade River Pass, Mr. this subject are such, I humbly think, as to warrant my obtrusion with a few obserbeen good enough to give me credit for Lower Fort Garry (Red River), via South the sea." end of Lake Nepigon, my sections, as projectively given in 1869, aggregate 970 measured or even given any sort of estimiles. Mr. Fleming's report, as the result of instrumental measurement along the same objective points, is 973 miles. Only three miles of difference! On actual location of the line we may differ representation, a branch expedition are less. His section at this part is from Edmonton in the Fall of 1872, via report.

railway with its elongation by curves and this incident, for I perceive that, some gradients in conformity with the physical way or other (see Canadian Monthly of May features of the country—my estimates last) Mr. Horetsky, the gentleman who, are equally well borne out by Mr. Flemfrom his chief at Edmonton, got my ing's report, but that in a manner requirpamphlet as part of his instructions, has ing elimination from his different section received all the credit of bringing this Pass sheets, and as I shall hereafter demons into notice. Mr. Macoun, botanist, his

to warrant my obtrusion with a few observations which may, possibly, be of some little value in the way of information to all or most concerned. Accidental circumstances, alluded to by Mr. Fleming in his report (page 13). viz., my early life in the far North-West and British Columbia, and the possession of my father's papers, reports, journals, maps, &c., respecting those wilds, have enabled me to give some useful information as to the least known of the regions in quastale. Five years ago, when first the scheme of a Canadian Pacific Railway was mooted, I, under the nom de plume been good enough to give me credit for bringing it to his notice. Of this more anon. In the meantime, as to it, I have, in limine, to say that the height assigned to it by me was a mcre estinate by myself, on data given in large detail and tabulated form in my pamphlet, "Peace River," page xix of my table of heights, and pages 92, 93 and 96 of text, and also in the preface to the work. My object in doing so was, as I state in the preface, "to direct attention at this juncture, to "to direct attention at this juncture, to "the particular fact, as a present objec "tive point, that the lowest, easiest ale. Five years ago, when first the scheme of a Canadian Pacific Railway was mooted, I, under the nom de plume" "say by such a Territorial Trunk Road" scheme of a Canadian Pacific Railway was mooted, I, under the nom de plume Britannicus, wrote a series of letters, defining descriptively, in advance of alt others, a feasible line for railway from Montreal to the Pacific. That was during the session of Parliament (Dominion), and the information given was practically "to the Pacific Slope, to the waygon of acknowledged in the House and by the "the settler is the Peace River Pass, and acknowledged in the House and by the "the settler, is the Peace River Pass, and Press. All survey since then, over the "which is less-I make it—than eighteen greater part of the vast, utter wild in "hundred feet above the sea." The question, has but confirmed the truth and road is indicated by yellow lines in my correctness of my statements and estimate to "Peace River." The precise mates in every particular. For instance, figures as worked out and given for as to the distance from East Nipissing to height of the Pass were "1750 feet above

even less. His section at this part is from Edmonton in the Fall of 1872, via run out, however, to Lake Manitoba, "65 that Pass, placing in the hands of his staff, miles" (as he states) beyond Red River. for guidance, my pamphlet with its jourmiles" (as he states) beyond Red River, for guidance, my pamphlet with its jour-which makes his total to that point "1038 nals of travel from Hudson's Bay to the miles," as shown in section sheet 9 in his Pass, and thence to the mouth of the Fraser, viâ Kamloops, showing the great As to the rest of the route—route for land in its length and breadth. I refer to campagnon de voyage, does me, in his report, better justice. But to proceed. The height of the Pass, i. c. of the water p level of the Peace River, in its passage across the Rocky Mountains, has been since measured by Mr. Horetsky, with aperoid, by observations taken at different points, and has been laid by Mr. Fleming it precisely that height, (see his section sheet 7 of Report at the point marked " Finlay River") the western or upper end of the transverse passage of the river through the range. The next object on the route, westwards, of which I gave an estimate of height, was "McLeod's Lake," on the Pacific slope of the range, and which I laid at 1,900 feet above the "McLeod's sea. Measured since by Mr. Fleming's staff, with aneroid, he gives it-in his said section sheet 7, at "1,850 feet above the sea." The next height given by me is that of "Stewart's Lake," forming, with other large lakes, the trough of the northern half of British Columbia. This I laid at 1,800 feet above the sea. After careful measurement since by Mr. Horetsky, with aneroid, Mr. Fleming's Report gives it, in said section sheet 7, at that, precisely. I may state in explanation that I went into this matter of heights to show that this northern plateau of British Columbia is low enough to admit of profitable agriculture and advantageous settlement, notwithstanding its high latitudes, viz., from latitude 53° to 56°; and more over, that it offers probable easy, or comparatively easy access, by territorial roads, and ultimately, perhaps, by railway-i.c secondary railway-across British Columbia.

For a transcontinental railway, however,—one to be the shortest and best possible between Atlantic and Pacific ports, and wholly on British ground,—I, at the very outset, advocated the Yellow Head Pass (old familiar ground to me), and thence, as indicated by the green line in my map to the "Peace River" Pamphlet, to Bella Coola, at the bead of the North Bentinck Arm. Allow me to give, from letter 8 of my Britannicus letters of 1869, already alluded to—see slip sent you—a summary of sections of the route proposed by me:—

Terminal Points Miles, per mile, Total.

		\$	\$
Montreal to Ottawa, via Vaudreuil Ottawa to summit be-	105	25,300	2 625 00
tween Lake Niplssing and Ottawa River	190	30,000	5,700,000
Nipissing to Michipi- coton River	320	35,000	11,120,000
Michipicoton River to Fire Steel River	310	40,000	12,400,000
Fire Steel River to Selkirk (Red River)	840	85,000	11,900 000

Total	2,605	Pay	\$90, 215, 000 \$100,000,000
Cools (North Ross	400	60,000	21,000,000
Pasa (Yottow Hoad) Milton Pass to Helia	250	80,000	7,500,000
Selkirk (Red Biver) to Elimonion Edmonion to Milioa	750	20,00	16,000,000

So I wrote, and so all Parliament read, in June-July, 1869. Since then, as we all know, "cost"—iron, labor, &c.,—has increased at least 25 per cent—but on this branch of the subject I enter not. It is of routes—and as known to me—that I would speak. In giving the above facts there is, I feel, a seeming egotism. It is repugnant to me; but I must show credential, and present some measure of credibility in this pleading. Shall continue in my next.

Y ours,

M. McLEOD.

Aylmer, Q., June, 1874.

LETTER II.

Sir, -- As the work of construction of the great iron road in question must, in the main, be from nearest Atlantic port -Montreal-and thence, from shiphold with railway plant from England, and elsewhere perhaps, I assume, for the nonce, this port as a starting point. Thence to the south-east end of Lake Nipissing, the line, as reported by survey, throughout its course of three hundred miles of the Ottawa Valley, presents every facility for railway - with an average gradient of only about two feet per mile, and, probably at no point-none so far as I know, and I have passed over three-fourths of it-none, I say, exceeding ten feet per mile. I speak from personal knowledge and the reports of Messrs. Shanly, Clarke, Keefer (T. C.), Kingsford and Legge, all civil engineers of high repute. By the last named gentleman, the line along the north side, crossing at the Matawan, and thence to the south-east end of Lake Nipissing, has just been examined in exploratory survey, and has been, as your columns showed, most favorably report-On the south side from Pembroke upwards, I am not aware of any explorations for railway line having been made, but from what I know of it, although not a civil engineer, I think I can safely say, as I did in 1869, there is a good line for railway. I hope to see, within two years, on both sides of the Ottawa, to Eastern Pacific Railway terminus at Nipissing, railways that shall serve as

freightways from Atlantic seaboard, and 1" to 1200 feet above the sea; at one from American and our own manufactories " point only, River English, does it dip of railway enginery and other plant. With " to 830 feet. return freight in lumber, and perhaps grain — western grain — from port at French River, there would, I presume, be profitable business for half a dozen railways to and from different points, viz., Ottawa, Toronto, Kingston and Montreal, and even perhaps Quebec, not to speak of other lines, Canadian and American, connecting with other Atlantic ports and market points.

The other points for initiatory work in construction which present themselves are, Sault Ste. Marie—if the line be thither bent—and the head of Nepigon Bay; and, perhaps, also at Prince Ar-

thur's Landing, Thunder Bay.

I touch on these points to indicate the possibility of constructing the whole of this section—from Nipissing to Manitoba, not only "after forty years," or "if ever," as shouted, on hustings, our present Ministers of State, and as averred their metropolitan organ, "the Ottawa Times, in their first flush of victory". but within forty months-I would say. The Americans, when in lowest exhaustion from their late war. built their Pacific Railway-longer and more difficult, in three years, if I mistake not. Why, in the name of common man-hood, I would ask, should not we, with the British Exchequer replete at our back, not do likewise? But, on this "northwesterly from Lake Nipissing to head, more anon.

You have, Mr. Editor, given a general statement of the different lines (three) of route, in this section—section from Lake | " cating an average rate of ascent much Nipissing to Lake Manitoba—reported by " more favorable than on the Railways Mr. Fleming. I take up No. 2, the "alluded to." shortest and best, according to his own

of his report:

"Commencing at the south-easterly "angle of Lake Nipissing, the whole dis-"tance to Lake Ellen (at head of Nepigon less favorable than route No. 2 in ques-"Bay) on Nepigon River, is about 550 tion. "miles. The line at Lake Nipissing is "730 feet, and at Lake Ellen 604, above continues the report, page 32, "and " sea level. Between these two extreme "points, the route passes over two "main summits, one about 110 miles "northwesterly from Lake Nipissing "at an elevation of 1420 feet above the "sea, and the other about 70 miles east-"erly from the River Nepigon, elevated "1400 feet above the sea. Between these | "easterly from Red River. "two summits, for a distance of ussin, characterized by no great "therefore to be overcome in 300 miles. "inequalities. The line for this long "and a descent of 976 in about 116 distance will be generally very "miles."

"level, the ground averaging from 1000"

"The route, for nearly the whole dis-"tance east of Nepigon, runs behind the rugged and elevated belt of country "which presents formidable obstacles on "the immediate shores of Lake Superior. "This rough district is crossed directly "back of Ellon, where it is narrow and "probably least forbidding. In consequence, about 25 or 3) miles of the "line north-easterly from Nepigon River "will show heavy work, while the re"mainder of the distance to Lake ! ipis-"mainder of the distance, will, it is be-"lieved, be comparatively light."

"In ascending Westerly from Lake Ni-" pissing, the rise to the highest point is "loss, and the length of time occupied "in making the ascent considerably greater than in passing from Lake On-"tario to Lake Huron by railways in "operation across the peninsula of West-

"ern Ontario.

"The Great Western ascends 753 feet in 44 miles.

"The Grand Trunk ascends 967 feet in 38 miles.

"The Grey and Bruce ascends 1,398 feet in 52 miles.

"The Northern ascends 748 feet in 27 miles.

"The total rise on the Pacific line "the highest summit east of Lake Supe-"rior is 690 feet, and the ascent is spread " over a distance of 110 miles, thus indi-

Mr. Fleming, in a foot note, states at account. He thus defines it, in page 30 what particular stations and points the summits occur in the above, and also in other railways in Ontario, giving heights and distances, and showing them all to be

> "Between the crossing of Fed River," "Lake Ellen, on Nepigon River, the dis-"tance is about 416 miles. The diagram "shows that the former point is 763 "feet above the level of the sea, "while the latter is 604 feet; the height " of land to be crossed is 1,580 feet above "the same level, and about 300 miles

"In passing through to Lake Superior

by way of comparison, "between Mon-So reports Mr. Fleming, in when speaking of his "treal and Portland, running easterly 39, when speaking of "ponding descent in 153 miles.

" to secure maximum easterly ascending " gradients, between Manitoba and Lake "Superior, within the limit of 26 feet to "the mile, a maximum not half so grea "as that which obtains," he declares, "on the majority of the railways of the "continent."

The route is certainly unexceptionably good, especially in view of the fact, as shown by the report, as the result of careful meteorological observations registered and returned over the whole route during two winters, that "the depth of "ceeding 30 feet per mile, and the works "snow is"—as Mr. Fleming, in page 34-1 "will not be heavy." The rest of the route of his report, says—"generally less on an to Edmonton was also surveyed, and is "average than it is at the city of ()t. represented—see pages 186-7—as, on the " tawa."

it touches navigation where best it should, above the sea. viz., at Nepigon Bay, nearest good portaccessible by rail eastwards, from the accessible by rail eastwards, from the —a practicable, and, in every respect, Prairie or wheat region—and also, that at a most favourable route, almost in air the point of crossing Red River, viz., at line, Lower Fort Garry, called "Stone Fort," gradient low beyond compare, so lar as a it touches the head of Lake Winnipeg know, and at no point, in eastward navigation, and at Manitoba Lake, does course, exceeding—says Mr. Fleming, as before stated—"26 feet to the mile." I "almost in air line," but it is to be tion requiring but little for practical and remarked, that if Sault Ste. Marie be beneficial development.

So much, for the present, as to this "Woodland Section" of 1038 miles, as Mr. Fleming designates and reports it. Yours,

M. McLEOD.

Aylmer, Q., June, 1874.

LUTTER III.

RED RIVER TO YELLOW HEAD PASS.

is all prairie, but that it is chiefly so. siderations—and they ought to rule in The distance assigned, on mere exploratory this matter—such an elongation of line, survey, however, is "1,040 miles," viz., say over two hundred miles, would mater750 from Red River to Edmonton, and ially affect, prejudicially, the commercial the balance thence to the Pass. The character of the route, as the shortest, of the balance thence to the Pass. The character of the route, as the shortest, of average grade from "Fort Garry to Edrailway, from Ocean to Ocean, between monton" is "2-3 feet per mile." "The the "Great Sailing! Arcs," in Northern "immediate ascent to the Yellow Head Atlantic and Pacific, and between mid-"Pass is not difficult, and the Pass it- Europe and mid-Asia.
"self is, as it were, an open meadow." To these two main objective points

"from Montreal, makes an ascent of miles a day ride through it in 1872.
"1,360 feet in 144 miles, and a correstion the summit of the Pass to a point ponding descent in 153 miles."
"49 miles castwards" there has been very "The information obtained suggests," careful survey, and is reported in pages he concludes, "that it will be possible 143-4. "From the summit the line fol-"lows the Miette River down the Caledo-"nian Valley to its junction with the "Athabasca, a distance of 18 miles, with "a total fall of 352 feet. In the first " nine miles and a quarter the fall is only "141 feet, with light work; in the next two miles the fall is 120 feet, but by a slight deviation of the line a grade of 1 per 100 (52.80 feet per mile) can be "obtained without heavy works. The "rost of the distance to the Athabasca is " by easy descending grades, nowhere ex-" ceeding 30 feet per mile, and the works " will not be heavy." The rest of the route represented—see pages 186-7—as, on the whole, even more favorable. The sum-An excellent feature in the line is that mit of the Pass is given at 3,746 feet

From it to nearest seaport-Montreal touched, the divergence—and that transversely and diagonally over very rough and rocky ground—will be fully one hundred and fifty miles off the true line. If this American connection be determined on, it would be better to have an independent line, I would say, along the com-parative flat immediately back of the duron shore rim, striking into the Nipissing basin, and there touching railway centre, at the main terminus. Between such line and the one surveyed by Mr. Fleming, along the valley of the Montreal River, there is a continuous uprise-for it scarcely can be called hill-Sir,-This section embraces what Mr. with irregular broken ridges of rock run-Fleming very appropriately calls "The ning, in the main, across the line of Central or Prairie Region"-not that it route. Not to speak of military con-

must all this work of pass-way for traffic "Rivers, and, by our surveys, is 2,866 and travel between the two "worlds"— "feet above sea level."

Kast and West—be bent. The Yellow From this hinging point all survey has Head Pass in 52°50', or about that, of proved itself too southerly. The true north latitude, is precisely in line, it may line is westwards, due west, or nearly so, be said. The nearest natural ocean port, to the head waters of Lake Queenel, disopen to us, thence westwards, is Bella tant, as I estimated, and stated to Mr. Cools, at the head of the North Bentinek Fleming, probably about 50 or 60 miles Arm. Its latitude, as determined by from the "Cache"—a space unknown to Vancouver. Sir Alexander McKen-the old fur traders in these parts, and as in Norie's navigation tables (a standard ernor and Directory Committee of the authority) is 52°24'. Lower Fort Garry Hudson's Bay Company in London, dated (Red River crossing) is in about 50°20'. "Kamloops, Spring, 1823," when in charge This last is, for Pacific Railway route in of what was then known as the Thomp-Canada, a defined objective point by na son's River District, extending from the ture. The same may be said as to the Yel-Rocky Mountains to the Pacille, and from low Head Pass. From its summit to tide the Columbia northwards, in fact, all what is water, N. Bentinck Arm, the distance I now British Columbia and part of Oregon, assigned in my Britannicus letters was, that he thought a trade track through assigned in my Britannicus letters was, for railway route, with its unavoidable it could be found, and he proposed, curvature, "400 miles." My map to to that end, to send two or three men, "Peace River," indicates it.

YELLOW HEAD PASS TO PACIFIC OCEAN.

The description of the route from the summit westwards is thus given, in page 144:- "From the summit of the Yellow "Head Pass the line follows down the "valley nearly due west to the head of ton and Cheadle, with true British pluck, "Moose Lake 184 miles, in which the fall "is 344 feet; on the first 2½ miles the half did the feat. " fall is about 45 feet per mile to Yellow along " Head lake, thence miles level. "leaving the average fall for the rest of the distance 20 feet per mile. "The line follows the north shore of the distance 20 feet per mile."

"The line follows the north shore of the line follows the line follows the north shore of the line follows the north shore of the line follows the lin " Moose Lake 8 miles to its outlet at the "west end; on this there are easy undu-"lating grades. The works from the summit to this point, 27 miles, will not "be heavy. From the outlet of Moose "Lake there is very little fall for a mile " and a half, but thence to Tête Jaune "Cache, 18 miles, the Fraser falls 924 "feet, giving an average of over 51 feet per mile. At Tête Jaune Cache the line leaves the valley of the Fraser and "turning almost at right angles follows " up a valley on a south-easterly course "to Cranberry Lake. The distance from " Moose Lake to this is about 32 miles, "and the average descent is 26 feet per " mile." "Lake to the crossing of Canoe River, 31 " miles, is practically level, as the surface " of the river is only 20 feet below that of "the lake; thence to Albreda I ake, 10 "miles, there is a rise of 264 feet. This "miles, there is a rise of 264 feet. " is on the watershed between the tribu-"taries of the Thompson and Columbia

zie, and Lieutenant Palmer, R. E., is to which, I saw by a draft of my father's about 52 ° 21'. That of Liverpool as stated special report on the subject to the Govalong with certain Indians, occasionally frequenting Kamloops, called the "Snare Indians," a small mountain tribe of about "60 families," frequenting both sides of the mountains. They failed to return for a year or two, and the matter was left as it had ever been—even to the North West Company's repeated efforts in that way-

Mr. Fleming, when charged with the Pacific Railway, put, at the earliest possible moment—as appears by his Progress by the North Thompson, to Albreda Lake. The effort—a really splendid one—cost him 87 out of the 100 of his picked mountain train (largely Mexican) of horses and mules. Mahood had been instructed to begin at the mouth of the Quesnel River, and work up thence to the source. He disobeyed orders, arrived at the river, and not finding, as he says, "boats suitable," he allowed himself to be drawn to the glacier heights of Cariboo, where, of course, and as his master knew, and might have told him, there was no pass for railway. Since then this Quesnel route, scent is 26 feet per just recently, by a flying trip by the District Engineer. Of this, more anon, in my next.

Yours truly,

M. McLEOD.

Aylmer, Q., June, 1874.

LETTER IV.

QUESNEL LAKE ROUTE.

Sir,—Resuming this subject where left it in my last letter, I propose to give, "north (magnetic.) The first to indiffrom the report itself, sufficient to indiffe of this day's journey the shore line of cate the correctness of what I have additional the mountain slopes come down Referring to page "though the mountain slopes come down the state of the sinclination is Sir,—Resuming this subject where I vanced on this point. Referring to page 129, under the head "Journey to Ques-nelle Lake," we have the following from Mr. Marous Smith, District Engineer:-"Friday, 11th October, I received," (he is addressing Mr. Fleming, then, in 1872, on his trip from ocean to ocean) " your last instructions this morning."

"within seven miles of the entrance to "the second narrows" (79 miles from foot "then, or 127 mile house."

"Next of lake).

"Next of lake in the late in the late in the late where it is larger than larger "day I reached the 150 mile house," • "Narrows (N. 45° E, magnetic) twenty Monday, 21st October—I started with three white men, two Indians, and a "train of seven animals; on the second day's journey the trail crossed a large farm in Beaver Lake Valley, near which we camped. This valley, as far as I could see each way from the adjoining heights, looked remarkably favorable for a line of railway; and as I have already stated, there is but a short neck of land between the head of it and Horse Fly Valley. Next day we are "Narrows (N. 45° E, magnetic) twenty "miles to the head of the lake where it runs due north had of the lake is hemotical in by bold recky "mountains, the cliffs along the shores "rising and so over-hanging. My impression is that the lake here passes through the Caribec range, for directly westward "were the snow-capped peaks that had been on our left (north) of the lake, and "been on our left (north) of the lake, and "a little to the south of east were the "Horse Fly Valley. Next day we ar"rived at the forke of the Quesnelle" peaks, apparently of the same range
"river; here there is a thriving village."
"between the Thompson and Clearwater,
"24th October—We started with
"and which continued from the Gold "our pack train on a very rough trail up "range west of the Columbia river. the right bank of the South branch of "There were no very high mountains "Quesnelle river, and at the end of 9 "visible northwards." "miles came to still water, where the boats were lying."

"Sent one of the Indians back with the pack animals goes on to say— " to Beaver Lake, to pasture till our re-" turn."

small one, he reports :-

"of the lake for the first eight miles is " tolerably uniform, and the slopes from "rocky and broken to where the six "forty miles, in a wide, swampy basin, "mile creek enters the lake. From this "where the Indians hunt beaver, &c. "to Mitchell's Landing (south) is a flat "beach covered with cottonwood." * * "of the lake, from where we struck it "this morning, is an easy wavy line, and Lake, as already reported.
"the slopes not very steep. All the "The Clearwater River," continues Mr.

"Island (58 miles,) where the axis of "the Cariboo state (gold-bearing) range crosses the lake. In three hours "arrived at Limestone Camp (No. 7)-72 "miles—where the lake bends due "north (magnetic.) The first 16 miles "to the water's edge, their inclination is "not great. Of the other fourteen miles, "six are bold and rocky, but with heavy "work, practicable for railway construc-tion; the rest is easy."

"Monday, 28th October - We were

"Mr. Barker," the gentleman of the flourishing village" aforesaid, who Proceeding in two boats, a large and furnished the boats, and guided Mr. Smith—"confirms this—he says that the "25th October, 2:30 p.m.—Reached "Niagara River (head tributary and "Nim's Point, 22 miles from the foot of "source of the Quesnel) enters the north-"the lake. The line of the south shore "east side of the lake three or four miles " from its head, that the falls of this river "are about 200 feet high, and for four "the water not very steep; then there "miles up from this the river is very are about four miles in which it is "rapid, then there is dead water for about

"From repeated readings of the ane-"roid, I estimated Quesnel Lake to be "26th October.— The south shore "about 2,580 feet above sea-level." N.B. -Three hundred feet lower than Albreda

"hills that bound the lake on the south Smith in page 132 of report, "rises in a "shore are covered with timber from the "range of mountains to the north-east of "water's edge to the summit; those on "Quesnelle Lake, which can be reached the north are higher, with bald rock." "27th October.— Arrived at Slate —he says himself—"said to be easy and not "esry high. There is then only the short lean—increased upwards to nearly 3,000 space between Clearwater lake and the feet above the sea. Clearwater River, as north or Cariboo fork of the Thompson any good map—say Trutch's—will show, "would shorten the line so much that it is " well worth consideration."

Smith, did he not see to this before, in-bed, snow-shed in winter and sun-shade stead of starting, as his report shows, "97 in summer. miles down the North Thompson," about 90 miles off-too far south-for even the line proper for Bute Inlet, and at a point over two thousand feet unnecessarily in tow on this meridian? Section sheets 4 and 5 show glaringly the faults of this line, starting from a point on the North Thompson, 1397 feet above the sea, and between that and the Fraser having to climb heights stated at 3,500 feet, and 3,104 feet above which all the 80a, Quesnel south shore, as described, avoids. As to that "tunnel of considerable length," in Mr. Smith's "mind's eye," it would certainly be interesting to know all, or something about it, in an engineering point of view. If I may be allowed -as one to the manor born-to offer an opinion on that point, I would be inclined to say, that the pass there—a point where three ranges meet, and, by law of nature, break into fragments, flanking curve, with moderate gradation—if I may so use such word—would overcome all mountain difficulty. Billowy, rather, and not mural, are all our mountains thereabouts. That "tunnel," in fact—good Mr. Distriction of the solution of without such a one from one employed to remove such bug-bears.

In speaking of the difficulty that the fur trade met with in its attempts to penetrate this upper region, with its fine bea- 151, in this matter of crossing the Fraser, ver flats of "forty miles" in extent, it runs thus: "The line follows the north was not-I would observe-the height or steepness of the mountains that blocked the way, but the character of the mountain forest-its immense growth, with an underbrush and heavy obstructive swamp flora, which, commencing at a point about 45 miles up the North Thompson—I re- "and the descent more rapid, so that member well the beauteous stream, in its "grades of 1 to 1.60 per 100 have to be placid lower reaches meandering, Pacto | "used, but with no heavy work. The

"river, about which I can get no informal is only a fork of this North Branch of the "tion more than that there certainly is a Thompson River, which fork (Clearwater) "pass. I have only met one Indian who is the least of the "have no expectation that a railway tunnellable heights between these waters "could be got through it without a tun-waters in common—of the "beaver "nel of considerable length, but this route flats" aforesaid. The "peaks" about, wooded to top or snow-capped, but adorp the scene-and to the Road, when made Precisely! But why, I would ask Mr. will but give, in their altitude above road

Yours.

M. MoLEOD.

Aylmer, Q., June, 1874.

LETTER V.

QUESNEL LAKE TO BELLA COOLA.

Sin,-Returning to our starting point in consideration of this Quesnel Lake section of the route, viz., the "large farm" in Beaver Lake Valley, and proceeding westwards we have the following description of the route, in page 123 of the report: "Journey from the 150 mile" (mile, on waggon road along Fraser River bank) "House to the North Branch of "the North Thompson River." "Friday, "6th September—At 9 a. m. started on this journey." "We followed the " well beaten trail to the forks of the Ques-"nelle, about eight miles, then took "an Indian trail running in a more vey for crossing at this particular point is reported, but is so at a point a little way
—about 10 or 12 miles further down—at
the Jose Valley. The report, in page "shore of William's Lake, 5 miles in "length, with undulating grades, and not "heavy work, thence down the Jose Val-"ley to the Fraser River, a little over "seven miles. Approaching the Fraser, "the valley becomes deep and narrow, "and the descent more rapid, so that "line crosses the Fraser at an angle of about 45 degrees, requiring bridging "tinguishable by belts of groves of 800 feet" (Only eight hundred feet—not a "a mile at least," as Captain Butler pretends, and that, according to him, at a height of "1,200 feet") "long, and 30" (only thirty) "feet above the river level; it then "follows the right or west bank of the "river for 17 miles, in which it has to "cross the face of some heavy clay slides "and high slate rock bluffs, with some "Polish gentleman, by whom we were "and high slate rock bluffs, with some "Polish gentleman, by whom we were "and high slate rock bluns, with solid grades of 1.20 per 100; in this section there will be some very heavy works, including two tunnels through lime "97 miles" divergence down the N. "including two tunnels through lime "97 miles" divergence down the N. stone rock, one of 1,500 feet, and the Thompson, and thence over the two inter-"other 2,000 feet in length."

of distances and comparative reference as may, for calculation of relative distances, my line to Bella Coola. The middle From this point to the mouth of Bella reaches of the Chilcotin Valley might, Coola River, the distance assigned, however, be used in common for the Bute on Lieutenant Palmer's measurements, Inlet and N. Bentinck Arm routes. All or estimates, is 170 miles of crooked descriptions of the country traversed, trail track. This, with the 334 miles eyen at such altitude, about 3,500 feet makes an aggregate of 504 miles. From above sea, represent it as a fine roll-this, deduct for the "97 miles" divering plateau, with forest, meadow and gence at the N. Thompson, say, at least prairie, and do that with beautiful and 140 miles, and for the Fraser Crossing, at fish-teeming lakes, the whole admirably least 24 miles, and we have, as closely as fitted for agricultural settlement. The may be "400 miles" as the probable description in pages 120 and 121 of the length of railway route from the summit report so represent it, and so I have of the Yellow Head Pass to tide water given forth, for years past, in press, Bella Coola, via the south shore of Lake newspapers and books, but unfortunately Quesnel, as marked by my railway line in there have been no members of Parlia-green, in my map to "Peace River," ment of these parts to take up the cause and as advanced in my Britannicus Letters of Upper British Columbia.

In page 121 of the report, speaking of better ground found considerably northwards of that surveyed, in the first instance, the description in the report is the same extent. I might say much on as follows:--" We followed up the Fraser this score, but will not unless forced to do "Valley two or three miles, then we made so by controversy-should it arise. " a long detour to the north to head out "a deep ravine; passing this, we ascended the high level of the rolling

"lating grassy plain, dotted with trees, valleys, each with its appropriate river, or

mediate summits aforesaid, to the Fraser As to this matter of crossing, it is to be via Jose Valley and thence "17 miles observed that it would be much easier further down," and thence to this apex further up the Fraser, but on this point in the Chilcotin Plain of 3,700 feet above the report is silent.

I am now following this too southerly sea, the distance is given in section sheet 5, at "334 miles." In section sheet 7, line merely for the nonce, as no other is given, and at a certain point, viz., apex in the "Chilcotin Plain," marked "3,700 marked "Old Fort" (Chilcotin), at a feet above sea level," in section sheet 5, assume it, but merely for determination given—and, as the nearest possible, it to character of route, for indication of be approximatively assumed as the same. of 1869. I never, of course, actually measured the route, but 1 had, accidentally, data to go on, which, then—I be-lieved—no one else had, at least, not to

> THE BELLA COOLA ROUTE, GORGE AND SEA-PORT.

"plateau, and saw spread out before us, This gorge, or valley rather, with its as far as the eye could reach, an undunumerous—13 or 14 I believe—lateral

[•] The calculation, in detail, runs thus: Half of total divergence on triangulation on base line from east end of Quesnel Lake to meridian of "Old Fort Chilcotin" 72 miles. Reduction as per Lieut. Palmer's estimate, on trail track (tortuous) for "road" route, between "Old Fort" and "The Preciples," say 5 per cent. on 97 miles—say 25 miles. Reduction, for road, on trail, from "Precipice" to tide water, say 5 per cent. on 73 miles—say four miles. Total reductions for road to Bella Coola, 101 miles—deducted from 503 miles, leaves precisely 402 miles. From which, for the shorter are of my more northern line, a small deduction is to be made—bripging a result within my original predicate.

well enough known." The charter pros- "of the much talked of Pacific Read pectus (printed and sent to me) for a "through British Territory." waggon road through it, in 1862—thus describes the proposed port, and route "authority," or as ground for aught than thence to Cariboo:—"The North Ben- further enquiry towards authentic determination. "tinck Arm possesses an excellent harmination of the questions of fact inbour, of sufficient capacity to accommovely "date the largest floets at all seasons of "the year.

"struction, and is studded in every directus. This in my next. "tion with open prairies, lakes and ex-"tensive meadows, affording abundant " feed for pack animals.

"The town site of Bella Coola is admir-"ably adapted for the formation of a " commercial depot for the northern por-"tion of British Columbia, being accessible by steamer from Victoria in forty ceed to show what the report of Lieut. "hours at all seasons of the year. The Palmer, R.E., of his survey in Autumn. "that is to say, from the head of the says of it." inlet to the point required on Fraser Page 21 "River—say Alexandria. With the ex- "Arm, a mere water-filled indentation in "Arm, a mere water-lined indentation in ception of a part of the descent through the Coast Range the trail is decidedly of a level character. This descent, or the taken as a fair type of the other interesting in the coast." This descent, or the taken as a fair type of the other interesting in the coast. "I not be taken as a fair type of the other interesting in the coast." North Benthalter of the coast. The coast is head the water-lined indentation in the coast." The coast is head the water-lined indentation in the coast. The coast is head the water-lined indentation in the coast. The coast is head the water-lined indentation in the coast. The coast is head the water-lined indentation in the coast. "come or avoided—a fact that must be "ters of the Bella Cools or Nookhalk "come or avoided—a fact that must be come evident to every one when in "River, a rapid mountain stream, 80 formed that we passed and returned packed horses over it during our trip last "purposed for the Cascade Mount-summer" (1861). "From the place where the trail first strikes the Bella Coola portion of that range and, subsequently." "River in the Coast Range (that is at the "the chasm or valley formed by the con-"foot of the slide, travelling from the in"terior to the coast) it runs along its
"bank the whole way to the head of the Nookhalk for 40 miles from its "the Inlet, through a deep gorge or pass "mouth is undoubtedly of estuary forma-

ticability, first for "mule trail, ten feet "has been gradually forcing back the wide," then for waggon road; speaks also of its harbor as "favorably reported on "vast quantities of alluvium and drift by seafaring men"; of its admirable site "which have been brought down by the for a town, facilities for wharves, docks, &c.; abundant timber; gold, copper, &c; and fisheries of "cod, nalibut, salmon," oulachans, herring, &c., and finally the worthy promoters—one of them (Mr. Kanald McDonald, son of Chief Factor Archibald McDonald), a gentleman born "tance outwards; it is bare at low water in the country, and thoroughly familiar "spring tides for about 700 yards from with it, and the other, John G. Barnston, "high water mark, and at a distance of Esq., barrister, late of Montreal, son of Chief Factor Barnston, Hon. H. B. Co., and now, I believe, a member of the Local Legislature of British Columbia— "soundings rapidly increase to 40 and Local Legislature of British Columbia— "son to 70 fathoms." [Note by mythus wind up: "So that it appears to us "self. A little dredging will "scaled a nowable that the future town "casily improve this I." "Another small "probable enough that the future town "easily improve this.] "Another small

streamlet, is, I am convinced, "not half!" of Bella Coola will yet be the terminus

In the meantime I purpose to examine the year. what best evidence we, so far, have on "The country through which the road the subject, and which Mr. Fleming's re-"will pass presents few difficulties of con-port—an exhaustive effort—presents to

Yours.

M. McLEOD.

Aylmer, Q., June, 1874.

LETTER VI.

The Palmer, R.E., of his survey in Autumn, "road would be about 200 miles long, 1862, as given in Mr. Fleming's report,

Page 219 of Report :- "North Bentinck "in the Mountains, which varies in width "tion, low, and, in many places, "from half amile to five miles." "swampy throughout, and to the same The report goes on to speak of its prac "process by which, for ages past, the land "Nockhalk, is to be attributed the existence of the large, flat mud-shoal which extends across the head of the Arm. This shoal, composed of black, fetid mud, supports a rank vegetation of " long swamp grass for about half its dis"anchorage is said to exist at the mouth "there is nothing to prevent a good bridle of the Noomamis River, about 3 miles "path or waggon road being carried the down the north shore of the arm." "To build wharves and perhaps a few "Po build wharves and perhaps a few "Page 224—"Happily, in this valley also no the rocky shores of the anchor- "there is a comparative absence of rocky the great and thence a road along the mountain wilder to the spot indicated in the "tain sides to the spot indicated in the "accompanying plan as suitable for a town site, is the only method I can ar-"rive at by which to meet the require"mentary rock, half a mile in length,
"ments of any future traffic that may
"at 27 miles from Ko-on-ko-otz, and rock
"occur on this route. The site I have
"in situ would be met with about two "selected is, in fact, the only available "miles above Nootkleia, but neither ground in the neighborhood, a sloping "difficulty is likely to prove of a serious " tract of land of about 1,200 acres in ex-"tent, covered with a profuse wild vege-"tation of clover, vetches, or pea-vine, grass, and berry bushes of various de-"scriptions, timbered in many places and " generally dry, but breaking up towards

"On the north side of the river much "of the land is heavily timbered within "the line of high-water mark with cedar, cotton wood and some species of fir," ЖC.

"Half a mile from the mouth, and on "opposite sides of the Nookhalk are "two Indian villages, &c. Two miles further up is another village, popula"tion about 1,200 souls. The natives are physically a fine race, tall, robust and "active." Navigation of Arm and "river is by cances. Page 222. "The Nookhalk Valley, which averages "from one-half to one and a half miles in "width, opening out considerably," (pro-bably to the extent of five miles as reported by McDonald and Barnston) "at the confluences of the principal tribu-" taries, is walled in Ly glant mountains of " from two thousand to six thousand feet "in height, presenting the usual variety "above the river, and since they are un"of scenery met with in mountain "avoidable, the labour of trail making be"travels in this country." * Page "tween Shtooiht and the Great Slide" (14 "Ine valley abounds with the natural features usually met with at low probable expense of "£1,000" (only "altitudes in this country; tracts of "heavy forest and dense underbrush," Bentinck Arm, 57 miles." " er Fraser, succeeded here and there by " groves of alder, willow and swamp woods, "occasional open patches of low berry bushes, forests of smaller timber with "a comparative absence of brushwood, "large alluvial flats, abrupt mountain "sides, poor gravelly soil, patches of way line be run diagonally across its face, swamp land, innumerable brooks and and, if need be, in zigzag?] " swamp land, indunities of fallen, " sloughs, and large quantities of fallen, "and, occasionally, burnt timber.

"THE GREAT BLIDE" AND MINOR ONES.

"There is an unavoidable slide of frag-"difficulty is likely to prove of a serious nature.

"Atnarko" (river with two tributaries.) "Valley is similar in many general cha-"racteristics to that of the Nookhalk: as "its stream is ascended so do the diffi-"culties of progress increase. The valley, "the river and the head of the Arm in low which near its mouth is about one mile swamps and ponds, and damp, grassy in width, gradually contracts, and the hillocks. "mountains, although diminishing sensi-"bly in apparent altitude, become more and more rugged, and frequently jut "out in low, broken masses into the "stream."

"HERE THE FIRST SERIOUS OBSTACLES TO "ROAD MAKING ARE MET WITH. From the "crossing of the Cheddeakult" (one of "said two tributaries) "to the foot of the "Great Slide, mountains crowd closely in "upon both sides of the stream; fre-"quent extensive slides of fragmentary " trap rocks of all sizes run either directly " into the river, or into the low swampy "lands bordering it, which are liable "to inundation at the freshets, and "the Indian trail which winds along "their faces is difficult and almost These slides "dangerous for travel. "vary from 300 to 600 feet in height, "and are capped by rugged cliffs extend-"ing to an average altitude of 1,500 feet "Bentinck Arm, 57 miles."

"At Cokelin, 1,110 feet above the level

" of the sea, the trail leaves the Atnarko "running about south-east, and strikes to "the northward, directly up the face of the Great Slide, at a high angle of ele " vation."

[Query by myself—Could not a rail-

sloughs, and large quantities of fallen, and, occasionally, burnt timber. "The height of the actual loose rock, and, occasionally, burnt timber. "as indicated by barometric measure-"Although the present trail passes "ment is about 1,120 feet, the trail "through a great deal of swampy land, "barely even winding up this portion,

but wriggling almost directly up the ocean to ocean. The same can scarcely "face in would-be zigzags bitterly trying be said as to the Bute Inlet line between to pedestrians. Above this it is lost the N. Thompson and Fraser, as surveyed, and now given in report.

"small timber, and rises more gradual small rises more gradual sm "seem of inconsiderable height and lose "gree of expedition, and as we proceed-"much of their rugged appearance."— Altered vegetation.—"Down by a gradu-"al descent of 500 feet to the brook "Hotharko, a tributary of the Atnarko, "and up its valley seven miles in an east-"north-easterly direction to its forks, "meeting with no serious obstructions but fallen timber and occasional small " rock slides. The space between the "forks of the Hotharko, which run in "the spruce, the hemlock, the birch and "south-easterly and west-north-westerly "directions, is occupied by a peculiar mountain mass of basaltic rock, 1,350 " feet in height, which has received the " name

'THE PRECIPICE.'

"cessively steep, the trail at first running pice is 3,840 feet above the level of the up the back bone of a singular spur, "sea." "Arriving here," he continues, "further up winding among crumbling "the traveller enters on the level of the fragments of rock, and finally, reaching "great elevated plateau which intervenes " by a dizzy path the summit of the perpendicular wall of rock, 100" (only one

[Here I would respectfully observe—a tunnel—it seems to me—say about a mile in length, from the eastern slope (slope shown in section sheet 7) of this "precipice" to the base of its "100 feet perpendicular," would bring the line to the head of a system of natural slides and "heavily timbered slopes." which, though steep for ordinary railway gra-dients, certainly present no feature insurmountable to railway construction and working, as proved, abundantly, under such like conditions, and worse, with higher heights, and steeper gradients, as on the Nevada of California; on the Andes of South America (with average gradients of 500 feet to the mile) for 30 miles together, on Pacific slope; on the Ghauts of India; and on the Alpine heights of Switzerland and other mountain lands, all-save British Columbia-

"ed, the mountains appeared to with-"draw from us. The country between "them soon opened to our view, which "apparently added to their awful ele-"vation. We continued to descend "till we came to the brink of a precipice. The precipice, or rather a succession of precipices, is covered with " large timber, which consists of the pine, "other trees. In about two hours we ar-"rived at the bottom, where there is a "conflux of two rivers that issue from the " mountains."

Reverting to Mr. Palmer's report, we see it stated by him that the distance "The ascent of this mountain is ex"miles," and that the "top of the Preci-"between the Cascade Mountains and hundred) "feet high, which crowns the "teau presents but few objects to attract "mass, and from which it derives its "attention, and the eye grows weary in "mame." "wandering over a vast expanse of wav-ing forest, unbroken save by the lakes "and marshes, which are invisible from the general level." "The summit "ridge is crossed at a distance of about "fifty-five miles from the Precipice, and " a height of 4,360 feet above the sea. The "extreme elevations of the rolling pla-"teau are very inconsiderable, seldom more than 800 feet above the general "level. Distance from Slide to Alexan-der" (Alexandria on Fraser River) "180 " miles."

Yours,

M. McLEOD.

Aylmer, Q., June, 1874.

LETTER VII.

LEATHER PASS.

TO THE EDITOR OF THE GAZETTE.

thoroughly or partially railwayed.

Sir.,—This is a term applied—or at least

At this "Precipice" alone, with its was so by the Fur Trade—in a general "slides," would special plant and motor way to the whole passage from the Northbe required, in the whole route from ern Bend of the Fraser, eastwards to Jas-

per House. The term "Tele Jaune" was thence to "Bentinek North Arm (Pacific applied rather to the "Cuche," and was Tide Water)," according to the same so called from the color of the hair—not sheet is "215 miles," which, however, unfrequent amongst French-Canadians of being tortuous Indian trail, to avoid Breton and Northern France origin—of lakes and swamps, would, for road route, an enterprising French trapper, of the as Lieut. Palmer explains, be reducible, name of Decogne, who used the singular cent, save as to that part, "73 miles," low, but comparatively level, of some 70 from the head of the Arm to the top of the Decision. square miles in area, amongst the mounthe Precipice. I assume that Mr. Flemtains there—for his "Cache" or entrepôt in ing has taken Mr. Palmer's trail distances his line of work.

CACHE TO NORTH FRASER BEND.

The Pass was, in my time in those parts, and for some years after, a highway not only for loads—leather principally but for the sick and even paralytic seeking medical aid in Canada, from all parts British Columbia, even from the Babine country. I, however, never passed through it, nor approached it nearer than Old Henry House (Miette), 18 miles from the summit.

From the summit of the Pass to the Cache, the latest re-survey has determined most favourably, as shown by report already cited, the question of railway line. Reducible, probably, to 500 for railway The distance of the Cache from the summits given at "50 miles;" its height, from a point about 45 miles S.W. of Gis"2,500 feet above sea level." From the come Portage to the Precipice, admit-This turning point may be laid at 54° 25' N. latitude. The Fraser at the Cache may be laid at 52° 55.' The trending is therefore, it may be said, 100 miles due north, and all that off the true line to N. Bentinck Arm Port. The distance from the Cache to this bend has never, so far as I am aware, been measured. In section sheet 6, under head "Fraser River," there is a point marked "248" (1.c., miles from summit of Y. H. Pass), with a line of "altitude," marked "1,900" (feet above in the distance (assumed in sheet) viz., 198 River Bend Route.

as given in report. As to the rest of this line, viz., from crossing of West Road River to Bend of Fraser, and thence to the Cache, no measurement of distance or height has, so far as I am aware, ever been made by any one. For lack of better, I take the figures given in section sheets 6 and 7. They stand thus:-

From Yellow Head Pass (Summ Cache	Miles.
Cache,	
From Cache to Giscome Portage	108
From Giscome Lortage to crossing o	WARE
Road River	
TAGAM TATA CIT	
From crossing of W. Road R. to Tide	Water
N. Bentinck Arm	215

Cache the trend of the Fraser is in a gene-ting, I believe, almost an air line—say ral course N.W., until at a point for which 175 miles—making my calculations thus, "Giscome's Portage" may be assumed, including also a reduction on the "198 it bends sharply, and strikes due south. miles" given for the distance from the Cache to Giscome Portage:—

	1.04
Summit Y. H. Pass to Cache (measured)	50
Cache to Giscome Portage (not measured).	175
Giscome Portage to Precipice "	220
Precipice to Tide, N. Bentinck Arm (mea-	
sure.i)	73
•	

Total..... 518 Nipissing to Yellow Head Pass (Mr Flem-Total..... 2531

I take the liberty of giving these sea level), but there is no name or designifigures, in case it should prove, on surnation given to the point. I assume it vey—if such survey ever be made—that to be the extreme northern point of the the Quesnel Lake line, as I have inbend, as in distance and height (river dicated, is too unfavorable for a doption. level) it agrees with or very closely ap. I really think, now, it would be found proximates the distance and height assign-considerably shorter than I have aded by me, in my pamphlet "Peace River," vanced. At the same time, in point of page 113, under head "Tête Jaune Cache." gradients, it will assuredly be less favorable than the Northern Fraser The latter route, miles (river course, navigable to canoes, and Mr. Fleming, as he says in his without falls) would average scarcely two report, has ever looked to as an alfeet and a-half per mile. From "Giscome ternative certainty for access to the Chil-Portage," which, by the way, was never cotin Plateau, even for route to "Bute Ina trade-route, to a point in section sheet let." North Bentinck Arm, I would obtain marked "Cross Black or West Road serve, is fully a hundred miles or more River," the distance, in sheet, is 95 miles; north of Bute Inlet, and is certainly twonearer the N. F. Bend, and, I humbly ceived, in recognition of my pamphlet think, is equally accessible by rail; we and letters, a note, in warmest terms, of have, at least, no evidence to the contrary. Cate 3rd April, 1873, from which, as being In any case, "Bute Inlet," as I shall here after show, is out of the question—is a "private," in its strict sense, I proceed political anomaly and physical impossi-bility for such a terminus as our highest of form I ought, perhaps, to ask his and ultimate beliests require, however leave, but in the present emergency well it may serve the special local—but there is no time for it. purely local-interests to which all effort in this great matter seems, most strangely—most unfortunately, so far—to have "pleasure, &o." • been bent. On this point, I can only repeat what I have said in my "Peace River"

motes and tables of distances [given in
much detail in pamphlet] must have
mot," I ask, in protest against non-exploration of all British Columbia, "that the
"much detail in pamphlet] must have
been," he says, "of immense service
to Mr. Fleming in preparing his last
much detail in pamphlet] and the
much detail in pamphlet must have
been," he says, "of immense service
to Mr. Fleming in preparing his last
much detail in pamphlet must have
the says, "of immense service
to Mr. Fleming in preparing his last
much detail in pamphlet, before I received "men of the south of British Columbia

bia, but of our whole vast North and "pled and dealt with the whole subject North-West regions yet untouched by "of the overland route.

authentic record, and of which the very "I must certainly add my testimony to people of Canada, called on to give so "that of Mr. Fleming"—(Mr. Fleming) largely of their financial resources for had spent some hours with him, in 1872 development, know less than they do of in his trip from ocean to ocean)—and," the centre of Africa. It struck me also that such exploration should precede the instrumental work of survey for railway.

Hence my Britannicus letters of 1869, inwork.

""" work." * "I retain a lively recolarowed by the Finance Minister (Hon. Sir John Rose) in moving the item, when asked "Isle à la Crosse' that I had the pleacui hone? by the Hon Mr Holton. "£300." "sure of seeing him about the year 1821. cui bono? by the Hon Mr Holton, "£300,- "sure of seeing him, about the year 1821 000 sterling"—besides the like sum for "or '22." * "We never met on the payment to the Hudson's Bay Company "west side of the mountains, as he left for their surrender of charter rights—was "before I came to the Columbia Depart-unanimously voted—voted specifically for "ment." He then goes on to inform me. exploration-eo nomine.

occurred and was said.

In 1872, early during session in April, celebrated botanist, Douglas. seeing nothing done in that way-for the Arctic coast to the Columbia River. I did from whom else, especially as to the inso, as before said, from personal knowledge and my father's and other well-got it, save from Governor Sir James garnered papers, maps, &c., and other Douglas.

Special information as to the regions in I may add—on this point of acknowledge. highest authority as to the geography of marked terms—of my pamphlet, the fol-British Columbia—for he has spent lowing authorities: nearly half a century there, and most of

thirds of that distance (say about 70 miles) the time as its local chief ruler-I re-

[Extract.1

"Dear Mr. McLeod, —I have had the "annual report, which, before I received "men of the south of British Columbia" your letter showing now he acquired who hold present rule," (April, 1872)
"are affaid to open to public view the grand middle and north of the magnificant of the magnificant country in their trust?"

"your letter showing now he acquired the information, greatly surprised me by its fulness of detail and evident familiarity with the leading physical features of the country, as well as the country in their trust?" "your letter showing how he acquired Exploration, not only of British Colum- " breadth and vigor with which it grap-

in correction of my statement in the I was in the Heuse at the time, and of pamphlet, that it was he saved my father's course, with much interest, noted what life from Indians at the Dalles of the Columbia, that it was not he, but the

Of course, I do not pretend that it was railway survey staff, with its incidental from me alone that Mr. Fleming got all cumber and procrustrean measure of such information as could be got only work, could not do such flying duty—I from us old Hudson's Bay and Northwrote my pamphlet, headed "Peace west people, who, in those stirring old River," touching, in exposition to further times in the far North, travelled much invite exploration, the whole field from more than they do now, but, up to the Hudson's Bay to Pacific, and from our time of starting his survey, I do not know

question. From Sir James Douglas—the ledgment and approval, in most cases, in

The Colonial authorities [Secretary of

State for the Colonies] England—His Exciting Chief Factor Harmon's Journal, collency the Earl of Dufferin,—His Honor which journal I had not seen, however, at Lieutenant Governor Morris, Manitoba the time I wrote. Extract—"1812, and North West Territories,—The Hon. "January 20th, I have returned from Hudson's Bay Company, by its Governor "visiting five villages of the Nateotains," and Board of Directory in London—a [Note by Ed. (i. c. myself) "Tribe be-body not given to such "small-moving," "tween Fraser's Lake and crest of the and whose act has, to me, a special value, in that it excuses my apparent violation of much of their traditional esoteric,— The Surveyor General of Dominion Lands [Colonel Dennis]-Mr. Crosby-statistician, and compiler [with much merit] of Lovell's Gazetteer of British North America [a standard work, and in which, under the heads "British Columbia," and "North West Territories," my statements. tabulated, and in descriptive order, as to the economic areas, relatively, of "wheat." and other economic resources, and general geodesy of the whole vast terrain in question, are given, in my own words, with due credit, by name, to me, and that with the long list of corroborative authorities consulted on the subject by the compiler.] I might add to the list, the Hon. Mr. Langevin and others. But coming back to the question of route:-

FRAZER BEND TO NORTH ARM, GARDNER'S INLET.

From this Fraser River Bend-a hinging point—say Giscome's Portage, to the portheast corner of the head of the possible highways for man as for the north-east corner of the head of the northern arm of the Gardner Inlet, a point determined by Vancouver as "lakes on the very plateau now marched to northern arm of the Gardner Inlet, a point determined by Vancouver as "lakes on the very plateau now marched to no Northern has every hear some or the northern has every hear some or the northern has a very hear some or the northern arm of the northern Latitude 54 ° 4' N, Longitude "231 ° 19'," as he puts it, (in old style), but which, now, may be stated at 128 9 41' W. of Greenwich,—the distance, in air line, is, I may, in his special lithe and strength, Giscome Portage (eastern end) at 1220 35' W. Longtitude, and, as aforesaid, at 54 ° 25' N. Latitude.

It is, I believe, available throughout, and without "heavy work" or gradients beyond 20 or at most 30 feet per mile at any point, not even in approaching tide-water. The course would be to old Fort Fraser, (50 miles, West by S. from Fort represents the point in question at the St. James), thence along the south-side all fine plain and lake country, almost of exceptional features, with a "low level-of the North-West Branch of the | "valley, three or four miles wide, form-Fraser—thence along a chain of lakes, known to the old Fur Trade as the Nateotain Lakes to a summit lake-reported | " extending some leagues to where the as of the same chain—whence by a "distant mountains appear to connect river marked "Salmon River" in the H. B. "the two ranges." There, possibly, may Co's. charts, as copied by Arrowsmith— be our Eureka; but alas! it is a little too see my map to "Peace River"—the water is far north for our Grand Trunk Road to

"Cascade Range, at the head of Salmon "river, which strikes at Hopkins' Point, "the head of the northern arm Douglas" "channel or canal of Gardner's Inlet] built," says Harmon, " on a lake which "gives origin to a river that falls into "Gardner's Inlet. They contain about "two thousand inhabitants, who subsist principally on salmon and other small "fish, and are well made and robust. "The salmon of Lake Nateotain have "small scales, while those of Stuart's "Lake have none." [Note by Ed. (myself.) "The only solution of the apparent "anomaly is that the Nateotain, or Nu-"teotum, as I have seen it elsewhere "apelt, salmon is a different kind, pro-"bably the powerful Ekewan-of which, "more anon, which had taken the short "cut from the sea to the height, via the "Salmon River."

In connection with this, in page 99 of my pamphlet, I say, "I refer to all "these salmon streams" (speaking of the Skeena, Fraser and the "Salmon River" as on. No salmon has ever been seen or "known to top in its leap fourteen feet in "any British stream. Possibly the 'Ekew-"an' (hereafter described) of our Pacific "do more, but certainly not more than a "foot or two. These facts are measures, "approximate at least, in the question or problem of feasibilities for railway "or roadway of some kind from this "plateau to the ocean."

mouth of the said Salmon River, as one "ing nearly a plain, covered with tall forest trees, mostly of the pine tribe, represented to flow to the Pacific. I refer China. For home service it would, to this in my pamphlet, page 105, thus, however, answer well—say for our moin giving certain extracts from a work, dern Eldorado—richest in the world probably—just discovered in northern British Columbia.

Yours,

M. MolEOD.

LETTER VIII.

PEACE RIVER PASS TO NORTH GARDNER'S INLET.

TO THE EDITOR OF THE GAZETTE.

Sin,—The following is my estimate on this head—estimate unavoidably vague, but still based on some data, as given in pages 21 to 25, and 96 to 106 in the text of my pamphlet "Peace River," and in pages xii, xiii, xviii and xix of my tables of distances and heights in the same.

Mr. Horetsky (a mere ex-Hudson's Bay clerk, so far as I know, and probably employed by Mr. Fleming for his pedestrian experience as such) not being, it would seem, a railway engineer, nor furnished with any instruments to make any observations -- which probably he could not make—in determination of latitude, longtitude or distances; and as in what he does give of these last, he varies very little indeed from those given by Sir George Simpson, Mr. McDonald, and myself, and as to heights, perfectly accords with me; I may say, although mine were mere calculations from journal entries, in a canoe voyage of over three thousand miles from Hudson's Bay to the mouth of the Fraser—from Ocean to Ocean—and his are, professedly, "aneroid measurements," I am forced to rest on my own data, as reported and given in my "Peace River." Peace River Pass is, as I show in page 90 of my pamphlet, in about Latitude 56° 18'—236 miles north of the Yellow Head

The following is my estimate of Railway route by it:—

Joane sty In.—		
Peace R. Pass to McLeod Fort-		
continuous average grade 1½		
feet per mile	110	mile
McLeod Fort to Foot St. James,		
undulating, with probable		
max. gr. 20 feet per mile	80	"
Fort St. James to Gardner Inlet		
North, along South side of		
N. W. Branch of Fraser, un-		
dulating at the beginning and		
end, but level in middle	210	16
	400	"
Add—Nipissing to Red		

Maximum height, say 2,200 feet above the

Here, it may be well to give in juxta relation, the route to the same Pacific point, via the Yellow Head Pass.

Lours Are and Tomon Trough T	₽₽ •	
Niplesing to Red River—(mea-		
Red River to Edmonton—(esti-	973	milos.
mate)	750	66
Edmonton to Pass [Y H]—[mea-		
sured] Summit [Y H] to Cache—[mea-	288	44
sured]	50	46
Cache to N Fraser Bend-[esti-	,	
mate]Thence to N Gardner Arm—[es-	180	"
timate]		44
-	~~	
	2512	11

Maximum height, 3,746 above the Sea:—
Add for height above that of the
Peace R route—operative

equivalent.....100

Yellow Head Route with operative equivalent2,612 miles. Peace R. Pass Route2,523 "

89 4

Balance in favor of latter, say. 100 "

That is for N. Gardner Arm, but the same might be fairly assumed for the South Arm. The South Arm would be a little nearer, but, on the other hand, the approach to it would, most probably, be

considerably higher.

Of the gorges of the Cascade Range, north of the Georgian Gulf, there remains but that—if such there be, as is probable -at the head of the Dean Inlet. I know nothing about it—but would have done so, I think, had it been known to the Fur Trade in those parts; and I have under my hand and possession the best, and perhaps fullest record of the whole history, in all working detail, of the coast trade of the Hon. H. B. Co. from its very initiation. However, I see in Governor Trutch's splendid map of British Columbia the largest river through the range, in those latitudes, marked to the head of Dean Inlet. The head of the inlet is in about 52° 52', and is apparently about 40 miles nearer the N. Fraser Bend than is the N. Gardner Inlet, and is about the same distance as South Gardner Inlet, from that common shunting point. In the Arrowsmith map before me—one used of old, and still, by the H. B. Co. in its work, and constructed from the Company's own charts—there is only a dotted line—signifying unexploration—from it

that about there, there is a gorge, giving which the Hudson Bay Company's little outflow to those "larger" (larger in comparison to the mountain waterfalls immelhim. But of those "Pender Rocks" that diately in view on the mountain sides) this gentleman speaks in his book as "torrents," which, according to Vancou"obstructing navigation," neither the ver, (see report, page 249) "appeared to Trutch map, in its fulness and correctthe Cascade Canal, near the head of Dean's fidelity, make any mention. Inlet, and means, I presume, source kind of mischievous misstatement and inland. The trough of the Dean Inlet blackening, to make some point sinister, probably averaging 2,500 feet, or rather more, above sea. It certainly should be at once explored, and, in fact, the whole be—corresponding much with that of Cascade coast and range, from Bentinck Arm to Naas.

as to these

INLETS AND THEIR NAVIGATION.

miralty, see page 245 of Mr. Fleming's The Queen Charlotte Islands, in their report, "May 26th: With a gentle breeze from the E.N.E. we stood" [exploring an unknown sea, with many a rocky wild of guickly, of first importance. They are isles innumerable] "we stood up Fitz-hugh's Sound" [leading into the leading of the leading into the leading in nugn's Sound" [leading into the channel] To Vancouver Island, however, does in the evening, with "all the sail Providence seem to point for Rule-Seat of we could spread." The Sound opens the Northern Posice

to a point about midway on the trail be-map. Also, we have "Bella Bella," a tween old Fort Chilcotin and the head of present snug harbour and trading post, the North Bentinek Arm. My idea is, referred to by Mr. Horetsky, and into "owe their origin to a more general and ness of the coast of British Columbia, nor permanent source." He is speaking of Mr. Fleming's report, in its exhaustive The same gorge is, however, clearly not that of the is made by this same "dedicator to the (fardner Inlet, and is considerably higher, Hon. Mr. Mackenzie," as to Bella Coola

Cornwall, Ireland, Scotland and Norwayin fact, their counterpart, but in grander Before leaving them, I would say a word scale, as is the Pacific to the Atlantic, is, to these of the Hebrides, "A grand coast for fine All of them—yea, the whole coast of harbours." Further—they all open out British Columbia, has for three quarters on the best coaling stations in the world, of a century past been the resort—con. Fitzburgh Sound having on the one side, stant resort—in all seasons, of coasting north, the Queen Charlotte Islands, with traders, ships, brigs, schooners, and other their numerous fine harbours, with coal oraft, British, American, Mexican, Rus. equal to finest English, and which has sian and others, and I never heard nor sold in San Francisco at \$20 per ton—also read of a wreck on it. And further, I good anthracite—and all most abundant take it upon me to say, that according to the whole world's record of marine disaster, there is, comparatively to its trade and accessible. On the other side, south, is the north-western end of Vancouver aster, there is, comparatively to its trade and use are as a safery court and all most abundant and use are as a safery court and all most abundant and accessible. and usage, no safer coast anywhere, un excellent coal, abundant and ready to lighted though it be. Vancouver's charts tumble from seam direct into ship's hold, and reports—our only best authority yet it may be said. To the more northern as to those PARAGES—prove it. For instance as to the "Burke Channel"—first explored by him—and of which the Pacific, but is so to Australia, the South North Bentinck Arm is one of the heads—he thus reports to Her Majesty's Admiralty. See Page 245 of Mr. Floridal The Queen Charlette Telepage 1945 of Mr. Floridal The Charlette Telepage 19

The Sound opens the Northern Pacific, yea of all the Pacific. to the broad ocean. "This by four An aggregation of remarkably good "the next morning," he goes on to say, "brought us to the arm leading to as it were by nature, easily accessible, and "Point Menzies, whose extent was left having everything required for safety in "This by four An aggregation of remarkably good "undetermined, and where in a cove on port, lying just on the great sailing are "shore, about eight miles without its enthe Northern Pacific, according to Maury trace, I expected to join the Chatham." chart; with finest of climates for In the preceding page he speaks also of cative life; good soil and flora; and coast a remarkably fine cove, large and safe line low enough for a railway from Victor ships, in the same passage to the Burke Channel but further in, which he designated "Safety Cove," marked also, I Grand Trunk t may, and I sincerely hope perceive, in Lieut. Governor Trutch's to yet see it, as a result, sentimental of

my poor father's subscription, (£500 stg.) lar rocky points in question, of the way, with others, nearly 40 years ago, to the In page 200 of his "Wild North Land," ed of a greater Britain in a wider Ocean. Ships will, it seems to me, not lose time to beat up the Straits of Fuga to the American Railway Terminus up Puget's Sound; easier for them would it be to discharge at Victoria, Barclay Sound, Quatsino Sound, or Port Rupert, and thence may connection be made with both Railway Termini, British and American. From Victoria to Bella Coolais only thirty hours, perhaps only twenty-four hours' steaming.

BUTE AND BURRARD INLETS.

As to the only other Inlets calling for notice, viz., Bute Inlet and Burrard Inlet, I have only one word—a sad one—to say. They were, or at least Burrard was our best for railway terminus. Now, both are blocked to us by the guns-foreign-of Sh Juan!

PEACE RIVER PASS AND OTHER PASSES.

Peace River Pass is thus described in Mr. Horetsky's report as given in Mr. Fleming's, Page 49. "We experienced "a very strong current all the way up to "the Finlay Branch (70 miles), i.e. 70 | I shan't say monstrous—but certainly out "miles from the head of the Portage at of the ordinary course of nature in official "the east end of this river Pass, and en-life political." Mr. Fleming is our paid "countered two rapids or falls. From Chief Engineer—our servant. As such, "the head of the Portage to within a few at our, the public's cost, he employed this "miles of the Finlay, the Peace flows subordinate to do certain work, viz: to through the entire Rocky Mountain get and bring to the table of our House "range. For 30 or 40 miles from the of Commons that precious thing, I-as "head of the Rocky Mountain canyon, Mr. Fleming so honestly states in his offi-"the valley is encompassed by mountains "of not very great altitude, but a little east of the "Rapide qui ne parle pas," "the main range begins, and the river " flows through it for about 25 miles, and "until within a few miles of the Finlay "Branch, and within this distance, peaks "4.000 and 5.000 feet above the eye, ex-"tend back north and south as far as " visible."

"The banks within this valley are very "rugged. " here and there, but steep and projecting "rocky points occur at frequent intervals, "and in many places the mountains rise this subordinate—is taken to Mr. Mac"up sheer from the river, neceskenzie, is offered to him, individually, in
sitating," avers Mr. Horetsky, "in a sense. He takes it: abuses it, to the "the case of road, many deviations

"and heavy works of construction."
I want to "nail" this statement, Mr. Editor. Captain Butler, the last, and cermenta is unfortunate; but in connection tainly not least, but, with Professor with it, it ought to be stated that Mr. Macoun, the fullest and best authority on this point, thus describes the particu-"trouvaille"—that, I believe, is the term

Puget's Sound Agricultural Association in connection with it, the great entrepôt, the newer London and Liverpool combin- This was on the 8th May, at Spring flood) This was on the 8th May, at Spring flood) "along the shore they rose in stupendous "masses; their lower ridges clothed in "forests of huge spruce, poplar and birch, &c." Page 267. "For two "days we journeyed through this vast val-"ley," (i. e. through the range proper, approaching the head of the Pass) "along "a wide, beautiful river, tranquil as a lake, "and bearing on its bosom, at intervals. "small isles of green forest, &c." "Thus we journeyed on. On the evening " of the 8th of May we emerged from the "Pass."

This description of impedimenta is unfortunate; but in connection with it, it ought to be stated that this same Mr. Horetsky - a subordinate officer, who seems to have ignored his chief, in his duty—has, primo, published, in advance of, and forestalling Mr. Fleming's report, a book, being a report of this same expedition in so far as he took part in it. It is "by permission" "dedicated to the Hon, Alexander Mackenzie, Premier, &c.," "by the author."

I refer to the incident as something cial report—had pointed out—had, as he says, "particularly drawn his attention to," viz: the "solution of the McLeod theory," as honest John Macoun calls itas to the Peace River Pass-Master subordinate finds it—just as told in my very pages in his hand. It became, then, in ordinary official dealing, a sanctity, to be laid before the people in due course by its delegated high-priest, His Excellency the Governor-General, by the min-There are gravelly terraces istry — subordinate still, in a sense of his Minister ad hoc. The thing -yet covered in the hands of this subordinate—is taken to Mr. Macpublic detriment, and uses it, in a way, to his own sinister ends.

Secundo—This description of impedi-

him—t. nother: a "better" pass, "probably," contends—further South, some 40 or 50 miles, called—by the Indians, for no white man has yet seen it—the "Pine River Pass." Fortunately, his companion, Professor Macoun, who it ime, as leaders in the Fur Trade, forbade had no such "mare's nest" in his mind's attractive coloring to the eyes of the man has professor would be attractive coloring to the eyes of the man has personal to the such that the from the due approals eye, to divert him from the due apprecia world, of their new pastures; but they tion of the important physical facts, to specially examine which, and truthfully report thereon, this "Branch Expedition was despatched by Canada's Chief Factor Harmon, Chief Factor McDonald, tion was despatched by Canada's Chief [Fur Traders all], I find evidence enough Engineer, gives us, in his most able report, to enable me to say :-- Mossrs. Macoun and a somewhat different account, thus. Page Butler are decidedly right, and Mr. 97 of Mr. Floming's report :- "The Peace Horetsky as decidely wrong. "River valley, through the mountains" (the italicization is my own; the words are his) "as far as I can judge" (better judge than, so far as I know, one who had never had experience in railway contained in the cont "railway or waggon road."

He then describes, at much greater length than Mr. Horetsky, the special features of the Pass and its approaches from the east, facility of bridging, "about "eight miles below Hudson Hope, and the "road to be carried up the left bank of "river all the way through the moun-"tains." * "Having passed down "the Fraser and over the Nevada," he continues, "since seeing Peace River, "I can say decidedly" (the italics are Mr. Macoun's) "that there is no comparison "between them. The nearest approach to Peace River, in appearance, is that "of the Fraser between Fort Hope and "Harrison River" (all smooth and open) "where no canons exist, and to give a "correct idea of the extent of the"
(NEL) "chief difficulties of the Peace
"River, I may add they do not extend "over more than about 6 miles."

As to snow difficulty, as well as the general features of the Pass, the truth is fairly stated by me, with authorities on page 96 and preceding pages in my pam phlet Peace River. In final citation I give it:

" There is, in fact, no snow diffi-" culty whatever thi "River Pass, not even in mid-Winter; "cent gateway between the two "worlds" " of this earth, and bears the isotherm of "to it, and there striking the centre of with all possible energy. "a gold region probably the richest in That in British Columbia, the line from

used by him, or some one who writes for "the world, would fast people the whole

So much for routes.

struction) "presents no very serious diffi-offer a few remarks, but they are scarcely "culties to the construction of either a proper to me, in my own name. As to this matter of routes, I had to defend myself, when attacked and almost robbed of my just credit as to the same.

Thanking you for your generous columns,

I am, Mr. Editor, Yours ever. M. MoLEOD.

Aylmer, Q., June, 1874.

LETTER IX.

TO THE EDITOR OF THE GAZETTE.

Sir,—The conclusions I arrive at, on the above, are briefly as follows:-

1. That exhaustive survey has determined Mr. Fleming's "Route No. 2," as laid in section sheet 9 of his report, as not only feasible, but as the best possible, in every respect, from Eastern Terminus to the Prairie Region.

2. That in British Columbia, exhaustive survey has proved the necessity of looking to some point North of the Georgian Gulf for a Western Terminus.

3. That a thorough, or at least, suffi-Peace cient exploration, by competent and inter; reliable men, should be made of all "the threshold is ever clear as that of an British Columbia, from the Rocky Moun-"open gateway—ever clean swept by every tains to the Cascade Range, between wind of heaven. It is the most manifical latitudes 52° and 57° N., for Railway route.

4. That in the meantime, between Red "strongest human development. A great River and Nipissing Terminus, the work "Territorial Road [with branches] direct of construction should at once proceed,

Victoria to Nanaimo should at once beltent, should be hypothecated, and in due

And that in Manitoba, with like urgency, the Pembina Branch should be "pushed through."

All this may, I presume, at once be begun with the eight millions of dollars, or at least half of that, now being raised in compensated by beneficial returns in a England on the pretension that the great England on the pretension that the great thousand shapes, ought, I humbly think, scheme is to be faithfully and carnestly to be a financial basis that none should begun and carried out.

INCIDENTAL

to the above is the consideration of ways and means." This branch of the subject is beyond what I intended to touch on, but, as I have already done so in my Britannicus letters of 1869, in the course of which the editor of the Ottawa Times of that day yielding, after controversy, to the force of my argument against allenation of the "Crown Domain" in areas of such extent as to create a predominating class interest to the jeopardy of individual political liberty; and to my argument also that the "Crown Domain"to called—is a holding merely in trust by this Government for due administration, and only administration, in permanent national behest, happily suggested a system of hypothecation of lands to the end sought. Issue about 8 July, 1869-or about then—I have not the precise words. The "idea" struck me with much force, and I really think it is, as matters now are, the most practicable one that has yet been mooted : adopting it, I respectfully

conclude,
5thly. That our best North-West and
British Columbia lands, to adequate ex-

course, for settlement, be sold, on terms to attract, and that the proceeds should be appropriated to the establishment of a sinking fund to meet rallway debentures.

This, with Imperial aid in fair measure, > and a moderate Pacific Railway tax, amply complain of.

6thly. But, above all, this great Canadian enterprise must not be made the plaything, or worse, of political parties; but as a work vital to our national existence, must be honestly as well as intelligently dealt with; and, moreover, be urged with all our power.

The scheme as at present laid before us, by the present Government, in its executive and financial aspects is, I think, utterly impracticable. In fact, their whole policy, from first to last, in it, has been one really of obstruction, though latterly (probably to raise money in Eng-land) they give it seeming countenance. The subterfuge is too transparent for us at home, here. They speak of "selling a charter." There was no sale of charter. But that aside. They, really, are selling not only a railway charter, but our charter of charters- that which we acquired at Runnymede; for on this scheme—its success, or its failure—rests, I take it, the question of all British charter rightquestion of Britain in America.

Yours ever faithfully,

M. McLEOD.

Aylmer, June, 1874.